COALITION OF CONCERNED INDEPENDENT TESTING LABORATORIES

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William F. Caton, Secretary
Office of the Secretary
Federal Communications Commission
1919 M St., N.W., Second Floor
Washington, D.C 20554

HAND DELIVERED

Re: Comments of the Coalition of Concerned Independent Testing Laboratories ("CCITL") to the Commission's Proposed Amendment of Parts 2 and 15 of the Commission's Rules to Deregulate the Equipment Authorization Requirements for Digital Devices as outlined in NPRM ET Docket 95-19

Dear Sir:

The members of the Coalition of Concerned Independent Testing Laboratories ("CCITL") are pleased to submit the following comment in response to the Commission's Proposed Amendments as outlined in NPRM ET Docket 95-19.

INTRODUCTION

The membership of CCITL consists of independent FCC testing laboratories with a day-to-day knowledge and experience with EMC testing and the existing FCC testing requirements and procedures. On a daily basis, CCITL members deal with manufacturers and integrators considering whether and how much testing to undertake or to forgo. These labs decided to come together only recently, prompted by their mutual concern about the impact of the Commission's Proposed Rule Changes. As FCC testing labs the members of CCITL are uniquely capable of understanding the issues being discussed and the likely ramifications of the changes proposed in this NPRM.

It is CCITL's sincere intention to utilize this process to more than simply voice its concerns about the Proposed Rule Changes, but to offer practical and viable alternatives to the Proposed Rules which are designed to meet the goals listed in the NPRM, while minimizing the negative ramifications of the Proposed Rules. Indeed, the suggestions presented in this Comment are designed and intended to further the stated and unstated goals as outlined by the Commission in the NPRM.

CCITL supports the Commission's effort to make the process of testing computers and peripherals more efficient for all parties involved and to address these legitimate concerns of the manufacturing industry and the FCC without neglecting the interests of consumers. CCITL's concerns arise from its belief that the Proposed Rule Changes will harm what is already a dwindling emphasis on enforcement, reduce compliance with the rules, and is tantamount to a reduction or elimination of testing requirements altogether. Such a result does not further the Commission's goals but indeed jeopardizes the fundamental reasons for requiring testing in the first place, to protect consumers. However, the Commission can achieve its goals without compromising the integrity of the existing system of testing. CCITL proposes the following:

COMMENTS

Declaration of Conformity:

The Commission has proposed to employ a new equipment authorization procedure for personal computers and peripherals, namely a "Declaration of Conformity" ("DoC"). The Commission's stated goal is to reduce the regulatory burden on manufacturers by speeding up marketing and sales of computer equipment, particularly for short life span equipment without compromising its objective of controlling interference from this equipment. In addition, the Commission has indicated a desire to bring FCC equipment authorizations in line with those used in other parts of the world.

CCITL supports the Commission's proposed change in equipment authorization procedures and believes that a DoC will further its goal by reducing the length of time it takes manufacturers to get these products to market. However, a DoC system with no practical vehicle for enforcing FCC testing requirements encourages disregard of the rules. A DoC system which does not include or require filing of any documentation with a central repository makes it more difficult, to the point of impracticality, for the FCC or other parties to carry out enforcement measures. Compliance with the Rules will be reduced as manufacturers weigh the cost of compliance with the Rules against the likelihood and cost of enforcement. For this reason the DoC system as proposed will result in less compliance.

CCITL proposes the acceptance of the DoC system presented by the FCC, with the exception that a minimum filing requirement be maintained. A minimum filing requirement should require manufacturers to submit basic documentation which includes information needed to identify the equipment which is being declared to conform. Information needed to identify equipment should include an identifying number (DoC/FCC identifier), a brief description of the equipment tested, photographs of equipment tested, a DoC statement and the identity of the testing lab. The FCC, upon receipt of the filing, should perform the following: 1) verify that an adequate filing was made, 2) verify that an authorized lab performed the testing, 3) enter the name of the Declarant, the identifier, and the type of equipment into the Public Access Link Database. Such files should be maintained for a minimum period of time as determined by the FCC.

Under this proposal manufacturers will be able to market their products immediately after successful test results are obtained from an authorized lab, thus resulting

in cost savings to the industry caused by the delay under the current system. In addition, testing and filing fees will be reduced because the FCC will not be performing an extensive review of test results as under the current grant procedure.

Under this proposal, the benefits of the existing system would not be lost. The filing requirements of the exiting system provide the resources necessary to allow for enforcement. Because this information is available to the public, industry, consumers and courts can and often do utilize this resource to take enforcement measures as "Private Attorney Generals." Furthermore, such a threat of enforcement will undoubtedly encourage manufacturers to file accurate and truthful documentation and additional penalties may apply for making fraudulent submissions. The effects of and benefits of requiring filing of this kind must not be underestimated.

Accreditation:

The Commission has proposed to adopt a new requirement that laboratories performing compliance testing be accredited under the "National Voluntary Accreditation Program" ("NVLAP"), developed by the National Institute of Standards and Technology ("NIST"). As part of its proposal, the Commission proposes to maintain the option of obtaining FCC certification for a period of two years to allow labs time to obtain accreditation under NVLAP because few labs are currently NVLAP accredited. The Commission's stated goal is to ensure the competence of test laboratories, presumably because the proposed DoC compliance program would increase the importance of lab competency since the FCC will no longer be performing an extensive review of the test results. Another goal, as noted in the NPRM, is to move towards international standards in the testing and approval of similar products.

CCITL believes that accreditation of labs is a positive goal. Indeed, this is true even under the existing FCC compliance program. CCITL agrees with the Commission's stated goal of ensuring the competency of testing labs, particularly in light of a DoC Rule Change. CCITL has grave concerns that NVLAP is excessively costly, its credibility and competency, as it exists today, is routinely questioned. The fact that so few labs have elected to undergo NVLAP accreditation is testimony to its faults. Certainly if NVLAP ensured the competency of labs, the market would have established a preference for NVLAP accredited labs. NVLAP accreditation has shown no effect on the marketability of testing labs. A costly accreditation process will have a marked effect upon costs of compliance because the costs of an accreditation program will undoubtedly be passed on to lab customers. In addition, many smaller labs, while competent, will not be able to afford an expensive accreditation process, resulting in less competition in the testing arena and higher costs of testing.

CCITL proposes the adoption of an accreditation procedure which does not require NVLAP as the sole source of accreditation. Such an accreditation procedure should conform with existing international standards such as ISO 25 for the accreditation of labs and ISO 58 for the accreditation of accrediting bodies. Such a procedure would allow NIST under the NVCASE (ISO 58) program to accredit additional private lab accreditation bodies. The competition created by this dynamic will provide lower accreditation costs and more efficient accreditation processes.

CCITL proposes that a longer transition period, such as four (4) years, is necessary to allow accreditation bodies other than NVLAP to form under existing programs and institutions. This transition period should also be regarded as a deadline for labs to become accredited for the purpose of DoC testing. Accreditation must not be a requirement for a lab to perform DoC testing until the transition period is over. The result of allowing only accredited labs to test for DoC prior to a reasonable deadline date will result in an unfair advantage of previously accredited labs over other labs. With a choice between FCC certification and DoC procedures, manufacturers will be compelled to choose DoC because of it many advantages over FCC Certification. The pressure to become accredited will also drive up short term costs and inundate accrediting bodies with applications. The pressure of so many labs applying for accreditation at the same time demands more than the two year period proposed by the Commission.

Any accreditation requirement should apply equally to all testing labs, whether they are "in-house" manufacturer's labs or independent. To apply a double standard to "in-house" labs versus independent labs, will put smaller manufacturers at a disadvantage due to higher costs of testing and will be unfair to independent testing labs.

Individual Component Testing:

The Commission has proposed to permit personal computers to be authorized based upon tests and approval of their individual components, without further testing of the completed assembly. Under this proposal, any party is permitted to integrate personal computer systems using the authorized components, or to interchange components in existing computer systems without testing the resulting system. The integrator will then be required to issue a new Declaration of Conformity indicating the basis on which compliance was ensured. The Commissions stated goals include decreasing the regulatory burden, reduce time to market, allow greater design flexibility and lower costs for manufacturers and consumers.

CCITL in no way supports individual component testing as a substitute to system testing. The Commission's own proposal points out the reason CCITL is compelled to reject modular component testing as a reasonable alternative to a system testing requirement. The Commission states that "[t]he ability of a personal computer system to comply with technical standards depends upon a complex interaction of the CPU board, power supply, enclosure and other subassemblies used in the system." In addition to the components listed by the Commission, cables, jumpers and countless other factors also contribute to make any modular component certification incapable of predicting the emissions in the resulting system. Only when a computer system is assembled entirely can one verify its complete electromagnetic profile in order to demonstrate compliance with the Commission's limits.

Such a system of compliance will ultimately encourage large manufacturer's to cease system testing in favor of component testing, because under system testing, manufacturers must carry through to production, the manufacturing details (such as routing of cables) which were necessary to obtain a system certification. Component testing allows manufacturers to ignore the details during the manufacturing process which were responsible for achieving acceptable emissions in the first place, simply by using DoC

components. Thus, a system of partial emissions reduction resulting from system testing will be reduced to a system which ignores the emissions of completed systems altogether.

Although, CCITL stands firm in its opinion that modular component testing will destroy the Commissions goal of maintaining reduced emissions, CCITL recognizes that its view may not ultimately prevail. Therefore, CCITL alternatively proposes that if components are to be tested individually, then the tests used should entail procedures and tests designed to minimize the variables. CCITL has established its own committee to address the specific testing procedures it will recommend should modular component testing become a reality. Such tests must be developed and sanctioned by competent bodies before modular component testing procedures should be adopted. Such testing procedures may be developed in conformity with Measurement Procedures ("MP") issued and assigned by the FCC for the purpose of ensuring uniformity of test methods and procedures. The following is a preliminary discussion of the components and testing methods which should be observed if component testing becomes a reality:

Motherboards, Adapter cards, and other Sub-components (i.e., graphics boards, serial/parallel I/O cards, hard drives, CD ROMS, etc.: The aforementioned individual components should be tested for radiated and conducted emissions without the use of a computer chassis to demonstrate compliance with the Commission's limit at present. Increasing the limits for these components to compensate for attenuation from computer chassis may defeat the purpose of the test, since resonance from the metal chassis and multiple ground loops may cause higher or lower emission amplitudes. This is never known until a test is performed with a chassis and further insight into the test configuration of these components can be determined.

Computer Chassis: Computer chassis should be subjected to a shielding effectiveness test e.g. MIL STD 285 or any comparable shielding effectiveness test that demonstrates shielding effectiveness. Manufacturers and assemblers can use the attenuation vs. frequency data/plot in identifying properly designed chassis, rather than to find out later after procuring large quantities that the design is not adequate enough to meet the Commission's limit. This is a reoccurring incident in labs around the country during testing.

Power Supply: The use of full and half resistive load on power supplies will demonstrate compliance to the Commission's conducted limit. Additionally, the use of a modified ANSI 63.4 radio noise power test can be used to measure the power supply's ability to attenuate radiated noise from the main and auxiliary AC. power cords when installed in a complete system. Inducing RF energy through the use of an injection probe on the DC power harness of the power supply will demonstrate the power supply's filter response to high frequency power noise. Some argue that if a power supply meets the conducted limits, there is less radiated noise on the AC cords. This may be true, but only if the power supply AC filter attenuates conducted noise by as much as 15 to 20 dB, the power supply is designed properly, and the power supply has a metal can flush mounted on the power supply chassis. Increasingly, manufacturers are designing on board power supply filters with wires connecting live, neutral and ground to the AC power receptacle. Although such designs can meet the conducted limits, many allow radiated noise on the AC power cord.

If components are to be individually tested, all aspect of the component's electromagnetic profile should be investigated and tested. There are too many factors that

affect the personal computer's conducted and radiated profile. An attempt should be made to address all of the factors that affect the personal computer being non-compliant.

CONCLUSION

CCITL members are pleased to submit the above comments for consideration by the Commission. It is our belief that the above comments suggest solutions to the Commission's outlined objectives which are both responsive and responsible. The experience of the membership of CCITL is composed entirely of independent testing labs making it one of the most qualified to forsee the implications and ramifications of the Proposed Rule Changes. CCITL urges the Commission to adopt responsible Rule Changes which do not endanger the Consumer and take into account the rapid development of ever-increasing complexity of computer technology. Such a goal is not incompatible with minimizing costs to industry

Sincerely,

COALITION OF CONCERNED INDEPENDENT TESTING LABORATORIES

Wendy Elizabeth Fuster

Wendy Fuster, CCITL Head

The following listed Independent Testing Laboratories, jointly as the Coalition of Concerned Independent Testing Laboratories (CCITL) support the above Comments:

1. F^2 Engineering Testing Laboratory, Wendy Fuster
2. Electromagnetic Engineering Services, Inc. (EESI), Harry H. Hodes
3. Compliance Consulting Services, Inc., Charles E. Cowden
4. Fountain Technologies, Inc., Wei Li and Jason Wang
5. Hyak Laboratories, Inc., Rowland Johnson
6. Washington Laboratories, Ltd., Ray Hammonds
7. Diversified T.E.S.T. Technologies, Annelle Frierson
8. PCTEST Engineering Laboratory, Inc., Randy Ortanez
9. Rhein Tech Laboratories, Inc., Desmond A. Fraser
10. Compatible Electronics, Dan Modi
11. Lambdametrics, Ben Bibb
12. CKC Laboratories, Inc., Chuck Kendall
13. Timco Engineering, Sid Sanders
14. DNB Engineering, Inc., Alwyn H. Broaddus
15. Professional Testing (EMI) Inc., Jeffrey A. Lenk
16. Rockford Engineering Services, Inc., Bandele Adepoju
17. U.S. Technologies, Inc., Sandi McEnery